

II. CLAIMS

1-30. (Cancelled)

31. (Currently Amended) A method for performing a chemical or biochemical process comprising the steps of:

moving or dosing liquid drops in accordance with the method as in claim 46 24; and

using the liquid drops in at least one of the polymerase chain reaction, enzyme-linked immunosorbent assay or a determination of enzyme activity.

32-35. (Cancelled)

37. (New) A substrate in which several electrodes are placed on which varying voltages can be applied individually and said substrate being provided with an ultraphobic coating, wherein the coating is electrically insulating and the contact angle of a liquid drop resting on the surface is more than 150° and the roll-off angle is a drop of liquid 10 µl in volume due to gravity is not more than 10° and a movement of a drop of liquid on the surface takes place without residues.

38. (New) The substrate according to claim 37, wherein the electrodes are substantially aligned with the surface of the substrate.

39. (New) The substrate according to claim 38, wherein the electrodes are aligned in an array.
40. (New) The substrates according to claim 37, wherein the ultraphobic surface has a surface topography where the spatial frequency f of the individual Fourier components and their amplitudes $a(f)$ expressed by the integral of the function $S(\log(f)) = a(f) \times F$ calculated between the integration limits $\log(f_1/\mu\text{m}^{-1}) = -3$ and $\log(f_1/\mu\text{m}^{-1}) = 3$ is at least 0.5 and consists of ultraphobic polymers or durably ultraphobic materials.
41. (New) The substrate according to claim 37, wherein the ultraphobic surface is a structured aluminum surface coated with a hydrophobic and/or oleophobic material.
42. (New) the substrate according to claim 37, wherein the ultraphobic surface is an aluminum surface treated with steam and coated with a hydrophobic and/or oleophobic material.
43. (New) The substrate according to claim 37, wherein the ultraphobic surface is a surface which is coated with $\text{Ni}(\text{OH})_2$ particles and covered with a hydrophobic and/or oleophobic material.
44. (New) The substrate according to claim 37, wherein the ultraphobic surface is a sandblasted surface covered with a hydrophobic and/or oleophobic material.
45. (New) The substrate according to claim 37, wherein the ultraphobic surface is a tungsten carbide surface structured by a laser and covered with a hydrophobic and/or oleophobic material.

46. (New) A method of moving or dosing liquid drops on a microscopic scale, said method comprising moving the liquid drops on a support having an ultraphobic insulating surface, using an inhomogeneous electric field, wherein the liquid drops are moved on the surface without any adherence of liquid residues along the path of movement, and the contact angle of the liquid drops resting on the surface is more than 150° and the roll-off angle of a drop of liquid 10 μl in volume due to gravity is not more than 10° .
47. (New) The method according to claim 45, wherein the electric field is generated by several electrodes on which varying voltages can be applied individually and which are aligned in an array.
48. (New) The method according to claim 47, wherein inside the array of electrodes a liquid drop is moveable in any direction.
49. (New) The method according to claim 45, wherein several liquid drops are moved and combined inside the screen of electrodes.